THE JOHNS HOPKINS UNIVERSITY

BALTIMORE, MARYLAND

Conferring of Degrees

at the close of the eighty-third academic year

*

JUNE 9, 1959

Wyman Quadrangle

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ORDER OF PROCESSION

The Graduates

Marshals

Howard E. Cooper
Alvin Nason
George E. Owen
Robert R. Long
Willis C. Gore
John Walton
Carl P. Swanson
Eliezer Naddor
Acheson Duncan
Margaret Merrell
Palmer H. Futcher
Majid Khadduri
Nathan Edelman

*

The Trustees and Honored Guests

Marshals

William D. McElroy and Dayton E. Carritt

*

The Faculties

Marshals

Stanley Corrsin and James W. Poultney

*

The Commencement Speaker
The Chaplain
The President of the Board of Trustees
The Presentor of the Honorary Degree Candidate
The President of the University

Chief Marshal

Donald H. Andrews

*

The ushers are undergraduate students of
The Johns Hopkins University

ORDER OF EVENTS

Milton Stover Eisenhower, President of the University, presiding

*

PROCESSIONAL

FANTASIE IN G — BACH

John H. Elterman, Organist

The audience is requested to stand as the Academic Procession moves into the area and to remain standing until after the Invocation and the singing of the National Anthem.

*

INVOCATION

The Reverend George A. Taylor

*

GREETINGS TO PARENTS

The President of the University

*

ADDRESS

JAMES RHYNE KILLIAN, JR.

Special Assistant to the President of the United States

*

CONFERRING OF HONORARY DEGREE

JAMES RHYNE KILLIAN, JR.

Presented by Professor Ferdinand Hamburger

ORDER OF EVENTS

Continued

CONFERRING OF DEGREES ON CANDIDATES

Presented by Professor Henry T. Rowell:

BACHELORS OF ARTS

Presented by Dean Robert H. Roy:

BACHELORS OF ENGINEERING SCIENCE
MASTERS OF SCIENCE IN ENGINEERING • DOCTORS OF ENGINEERING

Presented by Dean Richard A. Mumma:

BACHELORS OF SCIENCE • BACHELORS OF SCIENCE IN NURSING
BACHELORS OF SCIENCE IN ENGINEERING
MASTERS OF SCIENCE IN ENGINEERING
MASTERS OF EDUCATION
CERTIFICATES OF ADVANCED STUDY IN EDUCATION

Presented by Dean Ernest L. Stebbins:

MASTERS OF SCIENCE IN HYGIENE • DOCTORS OF SCIENCE IN HYGIENE
MASTERS OF PUBLIC HEALTH • DOCTORS OF PUBLIC HEALTH

Presented by Dean Thomas B. Turner:

DOCTORS OF MEDICINE

Presented by Dean Philip W. Thayer:

MASTERS OF ARTS, SCHOOL OF ADVANCED INTERNATIONAL STUDIES

Presented by Professor Henry T. Rowell:

MASTERS OF ARTS IN TEACHING
MASTERS OF ARTS • DOCTORS OF PHILOSOPHY

*

CHARGE TO GRADUATES

The President of the University

*

BENEDICTION

*

RECESSIONAL

TRIUMPHAL CHORUS — GUILMANT

The audience is requested to remain standing after the Benediction until the faculties and graduates have left the area.

CANDIDATES FOR DEGREES

BACHELORS OF ARTS

Michael Lewis Abraham, of Baltimore, Md.
Donald John Alabran, Jr., of Baltimore, Md.
Charles Bernard Anderson, of Clifton, N. J.
Bernard Francis Armstrong, Jr., of Baltimore, Md.
James Harley Baroff, of Washington, D. C.
Gerald Littleton Bartell, of Towson, Md.
Edward Keith Howard Battye, of Baltimore, Md.
George Alexander Baumann, of Baltimore, Md.
Bruce Richard Bendel, Hamden, Conn.
William Ernest Berndt, of Baltimore, Md.
Martin Edward Blackman, of New York, N. Y.
Ronald Jay Blitzer, of Rahway, N. J.
Ernest Allan Boatman, of Baltimore, Md.
Theodore Joseph Borgman, Jr., of Baton Rouge, La.
Zeddie Paul Bowen, of Baltimore, Md.
James Latham Bowman, of San Antonio, Texas
David Vincent Brant, of Baltimore, Md.
Maurice Moyer Bursey, of Baltimore, Md.
Robert Jack Burt, of Baltimore, Md.
Charles W. Casey, of Baltimore, Md.
Donald J. Chauncey, of Plandome, N. Y.
Benjamin Robert Chipman, of Baltimore, Md.
William Carl Clouspy, of Baltimore, Md.
Morton Coleman, of Norfolk, Va.
Emmett Cavanaugh Collins, Jr., of Baltimore, Md.
William Samuel Cooper, of Norfolk, Va.
Robert Peck Coppie, of Baltimore, Md.
William Potts Corbin, of Baltimore, Md.
John Brown Craft, Jr., of Aberdeen, Md.
Joseph Cudia, of Wood-Ridge, N. J.
Michael Edwin Dale, of Farmingdale, N. Y.
Macy Martin Darling, of Pittsburgh, Pa.
Sol de Swaan, of New York, N. Y.
William Kent Dewey, of Birmingham, Ala.
Samuel Duvall Dutrow, of Frederick, Md.
Richard Bernard Einaugler, of Tenafly, N. J.
Anthony Emanuel Elite, of Canton, Ohio
Guntis Elksnis, of Baltimore, Md.
Roland Nelson Emery, of Baltimore, Md.
Richard M. Epand, of New York, N. Y.
Marion Albert Figinski, of Baltimore, Md.
David Hirsch Fishman, of Baltimore, Md.
Fraser Cardot Ford, of Baltimore, Md.
Ronald Norman Fox, of Easton, Md.
Robert Charles Franke, of Baltimore ,Md.
Frank Peter Frenda, of Baltimore, Md .
Michael David Garrick, of Hampton, Va.
Charles Ely Ginsberg, of Alexandria, Va.
Joel Ian Glasser, of Baltimore, Md.
David Goldfarb, of Rutherford, N. J.
Joel Spencer Gordon, of Baltimore, Md.
Jerry Gottlieb, of Baltimore, Md.
Earl Barry Greenberg, of Miami Beach, Fla.
Peter Lyon Greenberg, of Washington, D. C.
Richard Jay Greene, of Passaic, N. J.
George Howard Greidinger, of Brooklyn, N. Y.
Larry Kent Haines, of Towson, Md.
Clell Gauvey Harral, of Fort Worth, Texas
Richard Franklin Harrall, of Baltimore, Md.
Laurence Stanley Harris, of Far Rockaway, N. Y.
Mauricio Heilbron Schemel, of Barranquilla, Colombia
Charles Gordon Herbits, of Baltimore, Md.
Richard Norman Hill, of Sonora, Calif.
Vernon Hixson, of Baltimore, Md.
Michael Levaun Hodge, of Olanta, S. C.
Milton Herman Holstein, of Baltimore, Md.
William Hand Browne Howard, of Wilna, Md.
Calvin Louis Hudson, of Cumberland, Md.
Peter Brian Hutchinson, of Baltimore, Md.
Peter Keim Iber, of Baltimore, Md.
Pascal John Imperato, of Pleasantville, N. Y.
Joseph Anthony Jeziorski, of Jamestown, N. Y.
Charles Richard Johnakin, of Baltimore, Md.
Malcolm Edward Johnson, of Baltimore, Md.
Walter Livezey Johnson, of Newport News, Va.
Myron Robert Kaplan, of Boston, Mass.
Daniel Richard Killoran, of Hamilton, Mass.
Visvaldis Klasons, of Baltimore, Md.
Peter Roger Knights, of Granby, Mass.
Samuel Kouvaris, of Baltimore, Md.
George Edward Krebs, of Clifton, N. J.
Karl Frederick Kuhlmann, of Ogden, Utah
Alan Robert Lakein, of Baltimore, Md.
Larry Traum Lefferts, of Baltimore, Md.
Ronald Lessing, of Baltimore, Md.
Michael Lee Levin, of Baltimore, Md.
Malcolm Edward Levine, of New York, N. Y.
Nick James Limbert, of Youngstown, Ohio
Lawrence Littman, Jr., of Baltimore, Md.
Joseph Murray Logan, of Baltimore, Md.
William James Long, of Fort Dodge, Iowa
Gerald Lee Looney, of Bluefield, W. Va.
Charles Shaler Loughran, of Pittsburgh, Pa.
David M. Luce, of Baltimore, Md.
Michael Baird Lukens, of Evansville, Ind.
Penn Lupovich, of Pittsburgh, Pa.
John Benedict Makin, Jr., of Belmar, N. J.
Byron D. Martin, of Falls Church, Va.
Guy Bertram Maseritz, of Baltimore, Md.
Roger Alan McKinley, of Oakland, Calif.

Héctor Mejía-Lara, of La Ceiba, Honduras
Robert Emmett Melia, of Baltimore, Md.
Ralph Preston Merchant, of Frederick, Md.
Alvin Miller, of Baltimore, Md.
Gerald Reubush Miller, of Roanoke, Va.
Joel Floyd Miller, of Minneapolis, Minn.
Meredith Hodes Miller, of Huntington, N. Y.
William Kelso Morrill, Jr., of Baltimore, Md.
Roy Philip Moss, of Hagerstown, Md.
Robinson Kendall Nottingham, of Baltimore, Md.
Alfred James O'Ferrall, III, of Baltimore, Md.
Pacy Aaron Oletsky, of Baltimore, Md.
Eugene Allen Padow, of Baltimore, Md.
David Lloyd Parkerson, of Baltimore, Md.
William Patterson, Jr., of Baltimore, Md.
Daryl Weston Paules, of New Freedom, Pa.
Brian Andrew Payne, of Baltimore, Md.
A. Samuel Peregoff, of Baltimore, Md.
John Konstantine Petrakis, of Dallas, Texas
Kenneth Allan Pressman, of Baltimore, Md.
Martin Arnold Prince, of New York, N. Y.
Gerald Joseph Putterman, of Norwalk, Conn.
Robert Rackmales, of Baltimore, Md.
John Edward Ramsel, of Baltimore, Md.
Arthur Resnick, of Baldwin, N. Y.
Ralph Daniel Reymond, of New York, N. Y.
Howard Anthony Richter, of Skokie, Ill.
Elliott Howard Ritter, of Baltimore, Md.
Joseph Arlen Rivkin, of Baltimore, Md.
Edward Richard Rose, of Baltimore, Md.
Turpin Harry Rose, of Baltimore, Md.
Norman Benjamin Rosen, of Baltimore, Md.
Raymond Myles Rosen, of Baltimore, Md.
Louis Stanley Rosenburg, of Baltimore, Md.
John Cushing Rowse, of Gulfport, Fla.
Jerome Gordon Salyers, of Baltimore, Md.
Steven Carl Scherping, of Stewart Manor, N. Y.
Michael John Schlessinger, of Baltimore, Md.
Stuart Albin Schuck, of Baltimore, Md.
William Alexander Scott, of Washington, D. C.
Erwin M. Sekulow, of Baltimore, Md.
Robert Keene Sharkey, of Bayonne, N. J.
Arnold P. Simkin, of Baltimore, Md.
Charles Truitt Smith, of Baltimore, Md.
Gerald Valentine Smolinski, of Baltimore, Md.
Earl Robert Snodgrass, of Leavenworth, Kans.
Albert John Southall, of Baltimore, Md.
Robert Spielmann, of Baltimore, Md.
George Henry Steele, of Baltimore, Md.
Harry Samuel Sterling, Jr., of Harrodsburg, Ky.
Harvey Jay Sugerman, of Pittsburgh, Pa.
George Joseph Svoboda, of Belcamp, Md.
Robert Harvey Tankel, of Haledon, N. J.
David Warren Todd, of Kearny, N. J.
Peter Anthony Tomasello, of Hammonton, N. J.
Leo Sampson Tonkin, of Suffern, N. Y.
Daniel O'Connell Tracy, Jr., of Baltimore, Md.
H. Rutherford Turnbull, III, of Baltimore, Md.
Daniel Ellis Wagner, of Baltimore, Md.
Robert Elm Walline, of Chicago, Ill.
Martin Lee Wasserman, of Baltimore, Md.
Edward John Weber, of Baltimore, Md.
James McCormick Webster, Jr., of Baltimore, Md.
Richard L. Weinstein, of Portsmouth, Va.
David George Whitten, of Baltimore, Md.
Theodore Allen Will, of Upper Montclair, N. J.
Robert William Williams, of Pittsburgh, Pa.
Joseph Robert Wilson, of Baltimore, Md.
Daniel Harvey Wolfe, of Baltimore, Md.
Jay Vernon Yost, of Stewartstown, Pa.
Marston Alexis Young, of Baltimore, Md.
Donald Zelman, of Brooklyn, N. Y. (172)

Graduating with General Honors

Charles Bernard Anderson
James Harley Baroff
Edward Keith Howard Battye
George Alexander Baumann
Zeddie Paul Bowen
James Latham Bowman
Maurice Moyer Bursey
John Brown Craft
Joseph Cudia
Marion Albert Figinski
David Hirsch Fishman
Michael David Garrick
David Goldfarb
Richard Jay Greene
George Howard Greidinger
Larry Kent Haines
Charles Richard Johnakin
Peter Roger Knights
Robert Emmett Melia
Alvin Miller
William Kelso Morrill, Jr.
Howard A. Richter
John Cushing Rowse
John Michael Schlessinger
Harvey Jay Sugerman
Martin Lee Wasserman
Theodore Allen Will

Graduating with Departmental Honors

James Harley Baroff
Edward Keith Howard Battye
Zeddie Paul Bowen
James Latham Bowman
Maurice Moyer Bursey
Samuel Duvall Dutrow
Marion Albert Figinski
Michael David Garrick
Richard Jay Greene
George Howard Greidinger
Larry Kent Haines
Charles Richard Johnakin
Malcolm Edward Johnson
Alan Robert Lakein
Robert Emmett Melia
Gerald Reubush Miller
John Michael Schlessinger
Martin Lee Wasserman
Theodore Allen Will

BACHELORS OF ENGINEERING SCIENCE

Samuel Paul Ashenfelter, of Baltimore, Md.
Millard Fillmore Beatty, of Owings Mills, Md.
Charles Newberry Beinkampen, Jr., of Baltimore, Md.
Edward Bernstein, of Baltimore, Md.
•Anthony Joseph Bocklage, of Baltimore, Md.
Vaughn Francis Bradley, of Baltimore, Md.
Earl Stanley Carr, of Orlando, Fla.
Charles Edward Chandler, of Baltimore, Md.
John Patrick Corcoran, Jr., of Baltimore, Md.
Andrew Paul Cox, Jr., of Baltimore, Md.
Michael Paul Morgan Coxe, of Washington, D. C.
James Clifford Craig, Jr., of Bowie, Md.
Eugene Charles Crist, of Baltimore, Md.
Hany Sang Dea, of Baltimore, Md.
Roger Pearson Denney, Jr., of Frederick, Md.
Clark Vincent Dohner, of Baltimore, Md.
Bruce Howard Duffany, of Ellicott City, Md.
John William Erdman, of Baltimore, Md.
Kenneth Lee Evans, of Salisbury, Md.
Donald Louis Fink, of Baltimore, Md.
Robert Earl Frey, of Baltimore, Md.
Sanford Friedlander, of Baltimore, Md.
Robert Gabriel Galuppi, of Baltimore, Md.
Victor Raymond Gardy, of Philadelphia, Pa.
Donald Morris Garmer, of Baltimore, Md.
Leonard Harold Gibbons, Jr., of Oxon Hill, Md.
Gerald Goldman, of Baltimore, Md.
William Dunbar Gould, Jr., of Cambridge, Md.
Leon Guzinsky, of Baltimore, Md.
Lester Cloud Hall, of Baltimore, Md.
John Faber Hanst, of Oakland, Md.
Albert Gene Harshman, of Myersville, Md.
Stanley Shipley Hertzbach, of Baltimore, Md.
Charles Philip Holt, of Baltimore, Md.
Phillip Howard Ireton, of Baltimore, Md.
Morris Alan Jones, of Parsonsburg, Md.
Russell Lee Keller, of Bloomsburg, Pa.
Robert James Kelly, of St. Louis, Mo.
Roger Kay Klaesius, of Baltimore, Md.
Stanley Alan Klein, of Baltimore, Md.
William Thomas Langan, of Baltimore, Md.
Edmond Paul Lazarus, of Baltimore, Md.
Howard William LeBrun, of Baltimore, Md.
Robert Edward Lentz, of Baltimore, Md.
Theodore Joseph Lewandowski, of Baltimore, Md.
Albert Samuel Liko, of California, Pa.
Charles Richard Lortz, of Baltimore, Md.
Thomas Marsalis Lucke, of Baltimore, Md.
James Richard McDonough, III, of Baltimore, Md.
Lawrence Francis McGoldrick, of Baltimore, Md.
Edwin David Mellits, of Denton, Md.
David Gordon Meredith, of Baltimore, Md.
Roger Michael Michaels, of Strovolos, Cyprus
Irvin Melvin Miller, of Baltimore, Md.
Bruce Edgar Moats, Jr., of Funkstown, Md.
Richard Lewis Morrison, of Mt. Vernon, N. Y.
Robert Bucher Muchow, of Linthicum Heights, Md.
William Wright Newnam, of Easton, Md.
LeRoy Larkin Niemyer, Jr., of Baltimore, Md.
Howard Stanley Pierce, of Baltimore, Md.
Raymond Francis X. Pipkin, of Baltimore, Md.
Robert Earle Porter, of Baltimore, Md.
Harris Rabinovich, of Mt. Rainer, Md.
Andreas Rannestad, of Bakke Vest-Agder, Norway
Ernest Dorsey Rehmeyer, Jr., of Baltimore, Md.
Donald Reese Roberts, Jr., of Severna Park, Md.
Sheldon Nicholas Rosell, of West Caldwell, N. J.
John Michael St. Clair, of Bethesda, Md.
James Alwyn Sandell, Jr., of Baltimore, Md.
John Byrd Sann, of Baltimore, Md.
James Allen Saxton, Jr., of Pittsburgh, Pa.
Alfred Lester Seivold, of Baltimore, Md.
Edward Andrew Serp, III, of Baltimore, Md.
Richard Barry Shane, of West Hartford, Conn.
David George Shigekawa, of Baltimore, Md.
Peter Xavier Sickinger, of Georgetown, Conn.
Arnold Barry Silverman, of Pittsburgh, Pa.
Michael Joseph Simmons, Jr., of Baltimore, Md.
Edward Murray Smith, of Baltimore, Md.
Daniel Alan Spintman, of Washington, D. C.
Daniel Joseph Summers, Jr., of Baltimore, Md.
Leon Joseph Taylor, of Lutherville, Md.
William Robin Taylor, of Georgetown, Del.
Peter Joseph Tribulski, Jr., of Baltimore, Md.
Carl James Van Tassel, of Hastings-on-Hudson, N. Y.
Robert Grinstead Vaughan, III, of Baltimore, Md.
Frank Martin Waldorf, of Baltimore, Md.
Henry Carl Weber, Jr., of Baltimore, Md.
Frederick Neal Weigel, of Moorestown, N. J.
William Blackburn Widhelm, of Baltimore, Md.
Samuel Edgar Willis, Jr., of Baltimore, Md.
Donald White Zang, of Baltimore, Md.
Neil Arthur Zarin, of Washington, D. C.

• Awarded posthumously

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Graduating with Honors

Millard Fillmore Beatty
Michael Paul Morgan Coxe
Donald Louis Fink
Stanley Shipley Hertzbach
Irvin Melvin Miller

MASTERS OF SCIENCE IN ENGINEERING

with titles of essays

James George Anderson, of Baltimore, Md., B. E. S., The Johns Hopkins University, 1957. Industrial Engineering.

Implementation of an Operations Research Recommendation for a System of Reports.

Alfredo E. Batlle, of Santa Ana, El Salvador, B. S. in C. E. Lafayette College, 1955. Sanitary Engineering and Water Resources.

Silt Accumulation in Loch Raven Reservoir.

Pedro Marcio Braile, of Resende Estado Do Rio, Brazil, B. S. in C. E. University of Minas Gerais, 1957. Sanitary Engineering and Water Resources.

Pumped Storage for Water Distribution Systems.

Andrew Frank Conn, of Silver Spring, Md., B. E. S. The Johns Hopkins University, 1957. Mechanical Engineering.

Plastic Waves in Cylindrical Magnesium Rods.

Donald Lee Denburg, of Baltimore, Md., B. E. E. The Cooper Union, 1957. Electrical Engineering.

The Power Density Spectrum of Noise Generated in a Magnetically Confined Plasma.

Jean-Paul Deschênes, of Quebec, Canada, A. B. Laval University, 1951; B. Sc. Soc., 1953; M. Sc. Soc., 1954. Business and Industrial Management.

Wage-Incentive Systems.

William Francis Gilley, of Richmond,, Va., B. S. in C. E. Virginia Military Institute, 1952. Sanitary Engineering and Water Resources.

Experimental Correlation of Heat and Oxygen Transfer in Water.

David Bernard Greenberg, of Baltimore, Md., B. S. in Ch. E. Carnegie Institute of Technology, 1952. Chemical Engineering.

An Investigation of the Viscous and Inertial Coefficients for the Flow of Gases through Porous Sintered Metals with High Pressure Gradients.

George Louis Hand, of Summit, N. J., B. S. Rutgers University, 1956. Mechanical Enginering.

An Experimental Investigation of Steady Flow of Non-Newtonian Fluids through Non-circular Straight Tubes.

John Ledyard Heckscher, of Berwyn, Pa., B. S. E. Princeton University, 1958. Electrical Enginering.

Non-Degenerate Reactance Amplifiers.

Lazar Ignjatovic, of Nis, Yugoslavia, B. S. University of Belgrade, 1951. Sanitary Engineering and Water Resources.

Deviations from Saturation Due to Photosynthesis.

Won Man Kim, of Seoul, Korea, B. S. E. Seoul National University, 1953. Sanitary Engineering and Water Resources.

Minimum Area above Storage Reservoir.

Michael Alexander Kott, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1956. Electrical Engineering.

Investigation of a Ferrite Image Line.

David Mansfield Murdoch, of Pittsburgh, Pa., B. C. E. Rensselaer Polytechnic Institute, 1958. Sanitary Engineering and Water Resources.

A Study of Piezometric Determination of Depth of Flow in Storm Drains.

Arthur J. Oster, of Brookline, Mass., A. B. Harvard College, 1954. Mechanical Engineering.

The Circular Plate with Radial and Concentric Ring Stiffeners.

K. Janardhanan Pillai, of Kerala, India, B. Sc. University of Travancore, 1940; B. S. E. 1944; M. E. in Public Health Calcutta University, 1957. Sanitary Engineering and Water Resources.

Growth of Coliform Organisms on Activated Carbon Filter Beds and the Use of Silver as an Inhibitor.

Dhruba Nath Ray, of Siliguri, India, B. E. University of Calcutta, 1953. Mechanical Engineering.

Quasilinear Heat Flow: Boundary Conditions Varying Periodically with Time.

Donald George Reichert, of Los Angeles, Calif., B. S. Universtity of California, 1951. Electrical Engineering.

Varying Conductance Phase and Amplitude Effects upon a Single Tuned Resonant Circuit.

Robert Henry Richard, of Baltimore, Md., B. S. in E. E. Alabama Polytechnic Institute, 1950; M. S. Florida State University, 1951. Electrical Engineering.

Statistics of the Level Crossings of Random Noise.

Manuel Rojas Gómez, of Tunja, Colombia, B. S. in C. E. National University of Colombia, 1956. Sanitary Engineering and Water Resources.

Color Removal by Means of Activated Carbon.

Robert Eugene Sears, of Anderson, Ind., A. B. Wabash College, 1941. Industrial Engineering.

Control of Telephone Sets in a Public Utility. Part I. Alternate Courses of Action for the Control of Telephone Sets.

Harry Fritchey Sieber, Jr., of Ardmore, Pa., B. S. University of Maryland, 1956. Industrial Engineering.

Control of Telephone Sets in a Public Utility. Part II. A Mathematical Model for the Control of Telephone Sets.

Maurice Martin Taylor, of Weston, Canada, B. A. Sc. University of Toronto, 1956. Industrial Engineering.

Analysis of Congestion in an Outpatient Clinic.

Joseph Gabriel Trunk, of Baltimore, Md., B. E. S. The Johns Hopkins University, 1957. Electrical Engineering.

Digital Computer Logic Circuits.

José Ramón Vendrell, of Ponce, Puerto Rico, B. S. University of Maryland, 1957. Civil Engineering.

Clay Mineral Effects on the Enginering Properties of Soils.

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DOCTORS OF ENGINEERING

with titles of dissertations

Edward Spencer Cassedy, Jr., of Baltimore, Md., B. S. in E. E. Union College, 1949; S. M. in E. E. Harvard University, 1950. Electrical Engineering.

Cross Sections of Large Cylinders by the Variational Method.

Barry George Cohen, of Plainfield, N. J., Sc. B. in Engr. Brown University, 1951. Electrical Engineering.

The One-Dimensional Energy Band Structure of Periodic Gaussian Potential Functions.

Richard Virdin Evans, of Ann Arbor, Mich., A. B. Princeton University, 1951. Industrial Engineering.

Diemaking in the Folding Box Industry.

Robert Blackburn Kerr, of Baltimore, Md., B. S. in E. E. Lafayette College, 1950; M. S. in E. E. Massachusetts Institute of Technology, 1955. Electrical Engineering.

Noise in Digital Computer Circuits.

Foster Hugh Middleton, of Detroit, Mich., B. S. E. in E. E. University of Michigan, 1947. Electrical Engineering.

An Analytic Hysteresis Function.

James Markus Morgan, Jr., of Lexington, Va., B. S. in C. E. Virginia Military Institute, 1946; M. S. E. The Johns Hopkins University, 1948. Sanitary Engineering and Water Resources.

A Stream Survey in the Uranium Mining and Milling Area of the Colorado Plateau.

David Adair Robinson, of Fort Lauderdale, Fla., A. B. Brown University, 1947; M. S. E. The Johns Hopkins University, 1956. Electrical Engineering.

Parametric Feedback in a Second Order System.

Joseph Francis Skrivan, of Stamford, Conn., B. E. The Johns Hopkins University, 1953; M. S. E. 1956. Chemical Engineering.

Partial Oxidation of Normal Butane.

John Linton Walters, of Baltimore, Md., B. S. United States Naval Academy, 1944; M. S. Harvard University, 1949. Electrical Engineering.

Time Lags in the Electrical Breakdown of Moving Air.

James Cornelius Wiltse, Jr., of Baltimore, Md., B. E. E. Rensselaer Polytechnic Institute, 1946; M. E. E., 1952. Electrical Engineering.

A Theoretical and Experimental Investigation of Dielectric Waveguides for Use at High Microwave Frequencies.

Leo Young, of Baltimore, Md., B. A. in Math. University of Cambridge, 1945; B. A. in Physics, 1947; M. A., 1950; M. S. E. The Johns Hopkins University, 1956. Electrical Engineering.

Design of Microwave Stepped Transformers with Applications to Filters.

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BACHELORS OF SCIENCE

Clifford Hobert Andrews, Jr., of Randallstown, Md.
Lois Atwell Ankewitz, of Baltimore, Md.
Avigdor Bonchek, of Cleveland, Ohio
Florence Fleischer Chodak, of Baltimore, Md.
Loretta Eileen Cottrill, of Baltimore, Md.
John Cornelius Emerline, of Timonium, Md.
Richard George Emerson, of Chicago, Ill.
Eleanor Harris Fox, of Towson, Md.
Walter Earl Garman, Jr., of Baltimore, Md.
Helen Muncaster Gassaway, of Baltimore, Md.
Charles Ronald Gill, of Baltimore, Md.
Arthur Carl Goray, of Baltimore, Md.
Maurice Irving Hasty, of Baltimore, Md.
Leo Joseph Hodges, of Baltimore, Md.
Georgianna Grace Stracke Hoffman, of Baltimore, Md.
William Frank Holin, of Baltimore, Md.
John William Hughes, of Baltimore, Md.
Daniel Wilson Kauffman, of Baltimore, Md.
Cora Wayt Kenney, of Baltimore, Md.
Max Knisbacher, of Baltimore, Md.
June Henrietta Lawry, of Owings Mills, Md.
Doris Caroline Levi, of Baltimore, Md.
Sarah Pernikoff Levin, of Baltimore, Md.
Leland West Mann, Jr., of Baltimore, Md.
Joiin Markell, Jr., of Gibson Island, Md.
Cecil James Marty, of Baltimore, Md.
Mary Mason, of Baltimore, Md.
William Neal Moerschel, of Pasadena, Md.
Marcel Andre Monier, of Baltimore, Md.
Benjamin Franklin Moore, Jr., of Baltimore, Md.
Norman Ernest Mullinix, of Baltimore, Md.
Meyer Neuberger, of Brooklyn, N. Y.
Anne Kathryn Oppel, of Baltimore, Md.
Frank Irving Paine, of Baltimore, Md.
Beulah Marie Price, of Baltimore, Md.
Michael Pylypczuk, of Berlin, Md.
Margaret Morrison Radin, of Baltimore, Md.
Kathleen Dale Schiff, of Baltimore, Md.
David Walter Steketee, of Glyndon, Md.
Patricia Loucks Wiley Sullenberger, of State College, Pa.
Alice Colyn Van Beek, of Baltimore, Md.
Norbert Francis Vasil, of Baltimore, Md.
James Barron Weatherly, of Baltimore, Md.
Melva Wilkins Wells, of Baltimore, Md.
Ira Lafayette Whealton, Jr., of Baltimore, Md.
Robert Arlen White, of Baltimore, Md.
Gloria Wienner, of Baltimore, Md.
Donald Drysdale Williams, of Baltimore, Md.
Jean Marie McDermott Williams, of Baltimore, Md.

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Graduating with Honors

Avigdor Bonchek
Georgianna Grace Stracke Hoffman
William Frank Holin
Mary Mason
Gloria Wienner

BACHELORS OF SCIENCE IN NURSING

Sarah Elizabeth Allison, of Baltimore, Md.
Mary F. Antes, of Canton, Ohio
Mary Ellen Apted, of Grand Rapids, Mich.
Ruth Marion Barnard, of Martinsburg, Pa.
Elizabeth M. Baugher, of Hershey, Pa.
Carolyn Probert Bedell, of North Tustin, Calif.
Cynthia Eileen Blunt, of Baton Rouge, La.
Caroline Veronica Brewer, of Portland, Ore.
Sally Maddren Dawson, of Baltimore, Md.
Ramona M. Eberhard, of Cordova, Md.
Ann Elaine Greer, of Frankfort, Ind.
Diane Calkins Harbeck, of Denver, Col.
Matilda Ann Hill, of Baltimore, Md.
Jean Louise Hummer, of Manheim, Pa.
Mary Sage Hurst, of Baltimore, Md.
Gertrude Theresa Jones, of Campbell Hall, N. Y.
Louise Roop Linthicum, of Baltimore, Md.
E. Patricia McCormick, of Baltimore, Md.
Rachel Steele Meyers, of Laurel, Pa.
Julianne Dilley Moon, of Clearwater, Fla.
Jane Ellen Olson, of Washington, D. C.
Patricia Ann Ransom, of Dayton, Ohio
Ann Lee Rockefeller, of Elmhurst, N. Y.
Margaret Elizabeth Royer, of Glenside, Pa.
Marilyn Ann Spriggins, of Warren, Ohio
Sarah Allison Stuard, of Genoa, N. Y.
Charlotte Thomas, of Pittsburgh, Pa.
Janet Gayle Veech, of Stillwater, Okla.
Lee-Margaret Vogel, of Briarcliff Manor, N. Y.
Jill Derstine Ward, of Chalfont, Pa.
Zola Edith Watson, of Eugene, Ore.
Nancy Sheryl Webb, of Richmond, Va.
Elizabeth Ruth Worthington, of Des Moines, Iowa

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BACHELORS OF SCIENCE IN ENGINEERING

Harley Wendell Ashley, of Baltimore, Md.
Marcellus Gale Bates, of Baltimore, Md.
Herman Jay Blinchikoff, of Baltimore, Md.
Frederick John Bunting, of Baltimore, Md.
Joseph Ford Coursey, of Baltimore, Md.
Joseph Salvatore Di Crispino, of Baltimore, Md.
Charles Elender Drebing, of Baltimore, Md.
Leslie Monroe Edwards, Jr., of Linthicum Heights, Md.
John William Flaherty, of Baltimore, Md.
Frederick Ambrose Hochrein, of Baltimore, Md.
Robert Randolph Holland, of Baltimore, Md.
Sampson Philip Holland, of Baltimore, Md.
Earl Campbell Hyde, of Baltimore, Md.
Birch Ambrose Kailer, of Baltimore, Md.
Thomas John King, of Baltimore, Md.
Earl Frederick Kline, of Baltimore, Md.
Francis Mitsuji Kudo, of Baltimore, Md.
Karl Ernest Lietzau, of Glen Burnie, Md.
John Peter Lockwich, of Baltimore, Md.
Martin John Memolo, of Edgewood, Md.
George Bernard Michel, of Baltimore, Md.
Durward Allan Mills, of Baltimore, Md.
Laurence Fay Moore, of Aberdeen, Md.
Emil Edward Pawluk, of Edgewood, Md.
John Frederick Perdew, of Baltimore, Md.
Barry William Poehlman, of Owings Mills, Md.
Jack Ice Poundstone, of Glen Burnie, Md.
Ervin Russell Pritchett, of Baltimore, Md.
Charles Alfred Rodney, Jr., of Pasadena, Md.
Robert Carl Scharf, Jr., of Severna Park, Md.
Robert Reamy Smith, of Lutherville, Md.
Lester Kenneth Staley, of Baltimore, Md.
Jerry Edmond Steele, of Baltimore, Md.
Walter Michael Stender, of Arnold, Md.
Robert Paul Stershic, of Baltimore, Md.
John Richard Wagner, of Baltimore, Md.
Robert Gordon Wagner, of Baltimore, Md.
Robert Frank Wancowicz, of Baltimore, Md.
John Orlando Wedel, Jr., of Baltimore, Md.
Charles Richard Wilson, of Baltimore, Md.
Donald Arthur Yale, of Arnold, Md.
George Monroe Youmans, Jr., of Long Bar Harbor, Md.

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Graduating with Honors

Robert Paul Stershic

MASTERS OF SCIENCE IN ENGINEERING

in McCoy College

with titles of essays

Tomos Llewelyn ap Rhys, of Ellicott City, Md., B. Sc. University College of North Wales, 1948. Electrical Engineering.

The Concept of Coupling in Electrical Engineering.

Samuel Bruce Boor, of Baltimore, Md., B. of E. E. Georgia Institute of Technology, 1956. Electrical Engineering.

Nonlinear Capacitance Amplifiers.

Eugene Rudolph Fox, of Glen Burnie, Md., B. S. E. E. Purdue University, 1949. Electrical Engineering.

Solution of the Differenial Equations of Electrical (and Other Physical) Systems by Means of Numerical Transform Methods.

George Washington Frey, Jr., of Baltimore, Md., B. E. The Johns Hopkins University, 1949. Electrical Engineering.

The Propagation Characteristics of Very Low Frequency Radio Waves.

Hugh Carey Hanks, Jr., of Towson, Md., B. S. in E. E. Kansas State College of Agriculture and Applied Science, 1943. Electrical Enginering.

Multiplex Ferrite Antenna Switch.

Robert Huntington Loomis, of Elkridge, Md., B. S. Trinity College, 1953. Electrical Engineering.

Decoupling Techniques in Multiloop Control Systems.

John Thomas McDonough, of Ellicott City, Md., B. E. E. University of Delaware, 1949. Electrical Engineering.

Intermodulation Distortion in Multiple Channel FM Systems.

Robert James O'Donnell, of Baltimore, Md., B. S. in E. E. Ohio Northern University, 1943. Electrical Engineering.

Radio Frequency Heating with Microwaves.

James Laverne Van Meter, of Baltimore, Md., B. S. in E. E. Washington State College, 1949. Electrical Engineering.

A Comparative Study of Combinational Logic Minimizational Methods.

Benjamin Horatio Vester, Jr., of Baltimore, Md., B. S. Virginia Polytechnic Institute, 1950. Electrical Engineering.

Some Spurious Effects in Magnetic Pulsers.

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MASTERS OF EDUCATION

Benjamin Bak, of Baltimore, Md., B. S. The Johns Hopkins University, 1952.

Conrad Henry Benner, of Baltimore, Md., A. B. University of Maryland, 1949.

Mary Catherine Swain Brunner, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1942.

Estelle Konieczny Collin, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1955.

Martha Ovella Dorsey, of Baltimore, Md., B. S. Coppin State Teachers College, 1952.

Barbara Ann Dreyer, of Baltimore, Md., B. S. Concordia Teachers College, River Forest, Ill., 1953.

Frank Elmer Ensminger, of Baltimore, Md., B. S. University of Maryland, 1953.

Patricia Anne Feeley, of Baltimore, Md., A. B. Cornell University, 1952.

Rene Gage Bigelow Freund, of Baltimore, Md., B. S. The Johns Hopkins University, 1956.

Douthit Lawrence Furches, of Army Chemical Center, Md., A. B. in Ed. University of North Carolina, 1935.

Jerome Randolph Garitee, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1956.

Elmer Kenneth Grove, of Baltimore, Md., B. S. University of Maryland, 1937.

Maria Dotson Hammond, of Baltimore, Md., B. S. Morgan State College, 1940.

Lewis Richard Harper, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1953.

Nathaniel Hawthorne Hoff, of Baltimore, Md., B. S. Morgan State College, 1950.

Irene Patricia Konieczny, of Baltimore, Md., B. S. University of Maryland, 1952.

Ercell Erskine Margie, of Baltimore, Md., B. A. Goucher College, 1946.

Laurel Donovan McLaughlin, of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1955.

Thomas Ralph Peters, of Severna Park, Md., A. B. Dickinson College, 1946.

Gavin Alexander Pitt, of Baltimore, Md., A. B. Brown University, 1938.

Burnell Randall Rosenberg, of Baltimore, Md., B. S. Loyola College, 1944.

Irma Kellam Roy, of Baltimore, Md., B. A. Morgan State College, 1932.

James Morris Sanders, Jr., of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1954.

Marian Campbell Sheehan, of Baltimore, Md., B. S. University of Maryland, 1952.

Theodore Gust Venetoulis, of Towson, Md., B. S. State Teachers College, Towson, Md., 1955.

Mary Helen Wheless, of Douglas, Ga., B. S. State Teachers College for Women, Milledgeville, Ga., 1953.

Abraham Yagod, of Yonkers, N. Y., B. S. The Johns Hopkins University, 1956.

Margaret Brandon Yates, of Baltimore, Md., B. S. State Teachers College, Bowie, Md., 1945.

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CERTIFICATES OF ADVANCED STUDY IN EDUCATION

Alice Fauntleroy Ford, of Baltimore, Md., B. S. Coppin State Teachers College, 1944; M. A. New York University, 1947.

Lester Carrington Hudgins, of Baltimore, Md., B. S. Coppin State Teachers College, 1942; M. A. New York University, 1955.

Charles Haven Kolb, Jr., of Baltimore, Md., B. S. State Teachers College, Towson, Md., 1936; M. Ed. The Johns Hopkins University, 1954.

Vivian Schwegler McIntosh, of Lutherville, Md., B. S. in Ed. State Teachers College, Emporia, Kans., 1934; M. Ed. The Johns Hopkins University, 1953.

Richard Donald Robbins, of Baltimore, Md., B. S. Mississippi Southern College, 1950; M. A. 1951.

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MASTERS OF SCIENCE IN HYGIENE

with titles of theses

Clyde Freeman Herreid, II, of Westminster, Calif., B. A. Colorado College, 1956. Public Health Administration (Comparative Behavior).

Temperature Regulation and Oxygen Consumption of Mexican Free-Tailed Bats.

Margaret Blanche Hoff, of Niagara Falls, N. Y., B. A. University of Rochester, 1949. Biostatistics.

Race Differences in Mortality from Cerebrovascular Disease.

Anne Christine Murray Parker, of Tortola, British Virgin Islands, B. Sc. University of Arizona, 1957. Pathobiology (Medical Entomology).

The Relationship of Mating Activity to Distribution and Segregation of the *Culex pipiens* Complex Populations in North America.

Eugene Rodriguez, of Elmhurst, N. Y., B. S. Queens College, 1954. Microbiology.

Studies on the Inhibition of Immune Hemolysis by Phlorizin.

Frances Mary Wright, of Washington, D. C., B. A. University of Manchester, England, 1950. Biostatistics.

The Waiting Problem in the Emergency Department (The Johns Hopkins Hospital).

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DOCTORS OF SCIENCE IN HYGIENE

with titles of dissertations

Francis Irving Catlin, of West Hartford, Conn., M. D. The Johns Hopkins University, 1948; A. A. Princeton University, 1959. Environmental Medicine (Audiology and Speech).

The Effect of Frequency Conversion upon Speech Discrimination.

Sister Marie Judith Foley, S. S. N. D., of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1936; M. A. The Johns Hopkins University, 1947. Microbiology.

Studies on the Virulence of Group A Streptococci.

Samuel Richard Heisey, of Mount Joy, Pa., B. S. Elizabethtown College, 1951. Environmental Medicine.

The Effect of Blood Flow on Oxygen Consumption of Mammalian Skeletal Muscle.

Adam Francis Hoefling, Jr., U. S. Army, B. S. Utah State Agricultural College, 1949; M. S., 1950. Microbiology.

The Effect of Temperature on the Growth and Physiology of Species of Bacillus.

Malcolm David Hoggan, U. S. Army, B. S. University of Utah, 1952; M. S., 1953. Microbiology.

Effect of Temperature of Incubation and Antibody on the Formation, Release and Spread of *Herpes simplex* Virus in FL Cell Culture.

Kenneth Oscar Phifer, of Pitman, N. J., B. A. Rutgers University, 1956. Pathobiology.

Studies on Glucose Uptake in Cestodes.

Louis Deno Reed, of Harrisburg, Pa., B. S. Pennsylvania State University, 1951. Environmental Medicine (Audiology and Speech).

Observations of Minimal Auditory Acuity Levels in Normal Hearing and Hearing Impaired Individuals.

Ann Snider Schluederberg, of Baltimore, Md., B. S. Ohio State University, 1950; Sc. M. in Hyg. The Johns Hopkins University, 1955. Microbiology.

The Effectiveness of Antibody in Eliminating Adenovirus and Preventing Cytopathogenic Effects in Infected HeLa Cell Cultures.

Aseffa Tekle, of Addis Ababa, Ethiopia, Diploma in Science, University College of Addis Ababa, 1954; M. S. Fordham University, 1956. Pathobiology (Medical Entomology).

The Physiology of Hibernation and Its Role in the Geographical Distribution of *Culex pipiens* Complex Populations.

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MASTERS OF PUBLIC HEALTH

Charles Edward Alexander, Jr., U. S. Navy, B. A. Yale University, 1951; M. D. University of Pennsylvania, 1955.

Virginia Apgar, of Tenafly, N. J., B. A. Mt. Holyoke College, 1929; M. D. Columbia University, 1933.

John Bancroft Atwater, of Bronxville, N. Y., A. B. Oberlin College, 1951; M. D. Yale University, 1955.

Theodore Balsam, of New York, N. Y., A. B. New York University, 1952; M. D. Chicago Medical School, 1957.

John Bernard Birch, of Abingdon, Va., B. S. Notre Dame University, 1934; M. D. Loyola University, 1940.

Alfred Andreas Buck, of Hamburg, Germany, M. D. University of Hamburg, 1945.

Richard Marshall Chubb, U. S. Air Force, B. S. Northwestern University, 1951; M. D., 1954.

Bernice Hirschhorn Cohen, of Baltimore, Md., A. B. Goucher College, 1944; Ph. D. The Johns Hopkins University, 1958.

Myron Michael Cohen, of Buffalo, N. Y., B. A. University of California, 1949; M. A., 1951; M. D. Northwestern University, 1955.

Andrés Guillermo de Wit Greene, of Mexico, D. F., Mexico, M. D. National Autonomous University of Mexico, 1946.

Victor Arnold Dick, U. S. Air Force, A. B. Berea College, 1938; M. D. University of Cincinnati, 1948.

Charles Van Loan Elia, U. S. Army, D. V. M. Agricultural and Mechanical College of Texas, 1943.

Ira Wilson Gabrielson, of Lutherville, Md., B. A. Columbia University, 1944; M. D., 1949.

John Ross Gauld, U. S. Army, B. S. University of Maryland, 1951; M. D., 1955.

Luis Ernesto Giraldo Correa, of Cali, Colombia, M. D. University of Valle, 1958.

Louis Andrew Herrmann, U. S. Navy, B. S. University of Pittsburgh, 1950; M. D., 1954.

Stephen John Kendra, U. S. Navy, B. S. University of Notre Dame, 1953; M. D. Jefferson Medical College, 1957.

James Bunting Kenley, of Louisa, Va., A. B. Asbury College, 1948; M. D. University of Virginia, 1952.

Joceline Anne Kumm, of Chocorua, N. H., B. A. Smith College, 1954; M. N., R. N. Yale University, 1957.

Ernest Colvin Leatherwood, Jr., of Fairfax, Ala., B. S. University of Alabama, 1950; D. M. D., 1954.

Frank Edward Lundin, Jr., of Media, Pa., B. A. Manchester College, 1949; M. D. Indiana University, 1953.

Wallace Mandell, of Austin, Texas, B. S. S. City College of New York, 1948; M. S. Yale University, 1951; Ph. D. New York University, 1954.

Leland Joseph McCabe, Jr., of Park Ridge, Ill., B. S. C. E. Purdue University, 1948.

John Leake Pitts, Jr., of Roanoke, Va., M. D. Medical College of Virginia, 1948.

David Dolcort Sachs, of Boston, Mass., A. B. Columbia University, 1951; M. A., 1952.

Mohamed Hamad Satti, of Khartoum, Sudan, Diploma, Medicine and Surgery, Kitchener School of Medicine, 1935.

Abdolrahim Movaghar Shaghaghi, of Tehran, Iran, M. D. University of Tehran, 1944.

Muni Inder Dev Sharma, of Delhi, India, F. Sc. (Medical) Hindu Sabha College, Amritsar, 1937; M. B. B. S., K. E. Medical College, Lahore, 1942.

Dalip Singh, of Delhi, India, L. S. M. F. Amritsar Government Medical School, Punjab University, 1936.

Donald Daniel Stamm, of Montgomery, Ala., V. M. D. University of Pennsylvania, 1948.

Jean Rose Stifler, of Baltimore, Md., A. B. University of North Carolina, 1933; M. D. Cornell University, 1936.

Richard Harold Svihus, U. S. Navy, A. B. University of California at Berkeley, 1952; M. D. University of California at San Francisco, 1955.

Peter Franz Dirk Van Peenen, U. S. Navy, A. B. Princeton University, 1953; M. S. University of California at San Francisco, 1956; M. D., 1957.

Benjamin Daniel White, of Anderson, S. C., B. A. Furman University, 1941; M. D. University of Georgia, 1946.

Granville Jean Womack, U. S. Air Force, B. S. University of Oklahoma, 1949; M. D., 1952.

Gerald Devereaux Young, Jr., U. S. Air Force, B. S. University of Nebraska, 1950; M. D., 1954.

Mohamed Abd-El-Moneim El-Zawahry, of Alexandria, Egypt, M. B., B. Ch. Cairo University, 1952; M. P. H. University of North Carolina, 1957.

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DOCTORS OF PUBLIC HEALTH

with titles of theses

Mary Kathleen Carney, of Baltimore, Md., A. B. College of Notre Dame of Maryland, 1950; M. D. University of Maryland, 1954. Public Health Administration (Maternal and Child Health).

An Epidemiological Approach to the Problem of Rising Neonatal Mortality in Baltimore.

Allan Goldfarb, of Baltimore, Md., B. S. University of Pittsburgh, 1950; M. S., 1952; Ph. D., 1954; M. P. H. The Johns Hopkins University, 1958. Public Health Administration (Mental Hygiene).

Judgments by Teachers, Principals and Mental Hygienists of the Relative Importance of Behavior Problems Occurring in Elementary School Boys.

Christian Robert Klimt, of Vienna, Austria, M. D. University of Vienna, 1944; M. P. H. The Johns Hopkins University, 1952. Epidemiology.

Conclusions from Cross-Sectional Serologic Surveys on Representative Population Samples.

Kochettu Kuruvilla Mathen, of Calcutta, India, B. A. Madras Christian College, 1937; M. A., 1940; M. P. H. The Johns Hopkins University, 1950. Biostatistics.

Attribute Matching in Comparative Studies in Public Health Research.

Minoru Muramatsu, of Tokyo, Japan, M. D. Tokyo University, 1946; M. P. H. The Johns Hopkins University, 1951. Public Health Administration (Maternal and Child Health).

Studies of Induced Abortion in Japan.

Mohamed Abd-El-Moneim El-Zawahry, of Alexandria, Egypt, M. B., B. Ch. Cairo University, 1952; M. P. H. University of North Carolina, 1957; M. P. H. The Johns Hopkins University, 1959. Epidemiology.

Ecology of the Streptococcus in Rheumatic Fever and Control Families.

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DOCTORS OF MEDICINE

Menelaos Anastasios Aliapoulios, of Manchester, N. H., B. S. Tufts College, 1952.

Betty Lou Ray Baltzan, of Baltimore, Md., A. B. Goucher College, 1950.

Lewellys Franklin Barker, II, of Baltimore, Md., A. B. Princeton University, 1955.

Thomas Robert Bell, of Mt. Vernon, N. Y., B. A. Williams College, 1955.

John Eugene Bennett, of Yuma, Ariz., B. S. Stanford University, 1955.

Turner Bledsoe, of Los Altos, Calif., A. B. Stanford University, 1955.

James Christian Branch, of Huntington, W. Va., B. S. University of California at Los Angeles, 1955.

Robert Cornelius Briggs, Jr., of Springfield Gardens, N. Y., A. B. Adelphi College, 1955.

Deborah Keirstead Bublitz, of North Easton, Mass., B. S. Bates College, 1955.

Paul Kurtz Burkholder, of Cleveland, Ohio, A. B. Manchester College, 1955.

Richard Joseph Cardines, of Hartford, Conn., B. S. Trinity College, 1955.

John Wellington Choate, of Belmar, N. J., B. A. The Johns Hopkins University, 1955.

Colin C. D. Clarendon, of White Hall, Md., B. A. Columbia College, 1955.

Lawrence John Clowry, Jr., of Green Bay, Wisc., B. S. St. Norbert College, 1955.

Jerome Thomas Combs, of Wallingford, Conn., B. S. Yale University, 1955.

Donald Frank Cone, of Greensboro, N. C., B. A. Haverford College, 1955.

Clyde Bolyn Cox, Jr., of Selma, Ala., B. S. University of Alabama, 1955.

Alan Standish Dana, Jr., of Ansonia, Conn., S. B. Massachusetts Institute of Technology, 1955.

Enrico Frank De Maio, of Bronx, N. Y., B. A. The Johns Hopkins University, 1955.

John McNeely DuBose, of Durham, N. C., A. B. University of North Carolina, 1955.

John R. Esterly, of Reading, Pa., B. S. Yale University, 1955.

Herbert Gene Ewy, of Hutchinson, Kan., A. B. University of Kansas, 1953; M. A. 1955.

Clyde R. Flory, Jr., of Sellersville, Pa., B. A. Lehigh University, 1955.

Wilmer Krusen Gallager, Jr., of Baltimore, Md., B. A. Swarthmore College, 1955.

Norman Leo Gamse, of Miami, Fla., B. A. The Johns Hopkins University, 1955.

Lorne Keith Garrettson, of Whittier, Calif., B. A. Pomona College, 1955.

Arthur Patrick Grollman, of Dallas, Texas, A. B. University of California at Berkeley, 1955.

Louis Cecil Harris, Jr., of Chattanooga, Tenn., A. B. Vanderbilt University, 1955.

Warren J. Holtey, of Ossian, Iowa, B. S. St. Mary's College, 1955.

James Gordon Hunter, Jr., of Bluefield, W. Va., A. B. University of Virginia, 1955.

Robert Ralph Hylton, of Sheridan, Wyo., B. S. University of Wyoming, 1955.

Frank Wilson Jackson, II, of Pittsburgh, Pa., A. B. Princeton University, 1955.

Thomas Kenneth Jones, Jr., of Girard, Ohio, B. S. Ohio State University, 1955.

Eugene Edmund Joyce, of Swan Lake, N. Y., B. A. The Johns Hopkins University, 1955.

Harvey Gilbert Kemp, Jr., of Oklahoma City, Okla., A. B. University of Oklahoma, 1955.

George McLaren Lacy, of Tulsa, Okla., B. A. Yale University, 1955.

Norman Lippard Lasser, of Houston, Texas, B. A. Rice Institute, 1955.

Gordon Berkeley Leitch, Jr., of Portland, Ore., A. B. Whitman College, 1955.

Raymond Earl Lenhard, Jr., of Baltimore, Md., A. B. Dartmouth College, 1955.

Arthur Allen Madden, of Columbia, S. C., A. B. University of North Carolina, 1955.

Victor Jack Marder, of Baltimore, Md., B. A. The Johns Hopkins University, 1955; M. A., 1955.

Richard Dehlbert Mau, of San Gabriel, Calif., B. A. Pomona College, 1955.

William Aloysius McGovern, Jr., of Staten Island, N. Y., A. B. St. Peter's College, 1955.

Marion John McMurtrey, of Idaho Falls, Idaho, B. S. Idaho State College, 1951.

Louis Ralph Mengoli, of North Plymouth, Mass., A. B. Harvard College, 1955.

Harvey Lee Meyers, Jr., of Grand Rapids, Mich., B. S. Heidelberg College, 1950; M. S. Michigan State College, 1953.

Patricia Tarr Mildvan, of Middletown, N. Y., A. B. Cornell College, 1954.

Francis Edward Moore, Jr., of Braintree, Mass., B. S. Yale University, 1955.

West Tabb Moore, of Richmond, Va., B. A. University of Virginia, 1955.

John Henry Mulholland, of Durham, N. C., A. B. University of Virginia, 1955.

Robert John Murphy, of New York, N. Y., B. A. Middlebury College, 1955.

Anthony Nicastri, of Brooklyn, N. Y., A. B. Columbia University, 1955.

Francisco Olazábal, of Bayamon, Puerto Rico, B. S. University of Notre Dame, 1955.

William Francis O'Toole, of Norwood, Mass., B. S. University of Notre Dame, 1955.

Joseph Hamilton Pattison, of Indianapolis, Ind., B. S. Purdue University, 1948.

Theodore J. Phillips, of Zanesville, Ohio, B. A. Swarthmore College, 1955.

Yosef Hayim Pilch, of Flushing, N. Y., B. A. University of Wisconsin, 1955.

Gerald Rodman Plotkin, of Waban, Mass., B. A. Amherst College, 1955.

Robert Joel Ruben, of Great Neck, N. Y., A. B. Princeton University, 1955.

Henry Joseph Starr, of Washington, D. C., A. B. Bowdoin College, 1955.

George A. Trapp, of St. Joseph, Mo., B. A. University of Colorado, 1955.

Herbert I. Vogel, of Brooklyn, N. Y., A. B. Brooklyn College, 1955.

Robert Foster Ward, of Dover, N. J., B. S. Rutgers University, 1955.

Scott J. Wilkinson, II, of Decatur, Ill., A. B. Harvard College, 1955.

James Warren Winkelman, of Brooklyn, N. Y., A. B. University of Chicago, 1955.

John Jacob Witte, of Passaic, N. J., A. B. Hope College, 1954.

Kai-Cheong C. Wong, of San Francisco, Calif., A. B. University of California at Berkeley, 1955.

Raymond Burger Wuerker, of Los Angeles, Calif., B. A. The Johns Hopkins University, 1955.

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MASTERS OF ARTS

in The School of Advanced International Studies

Richard William Armstrong, of Flourtown, Pa., A. B. Harvard University, 1954.

Anne McLennan Auchter, of Salinas, Calif., B. A. Pomona College, 1957.

Edmund Louis Auchter, of Cincinnati, Ohio, B. S. Xavier University, 1957.

Marianne Baer, of New York, N. Y., A. B. Barnard College, 1957.

Robert John Baker, of Baltimore, Md., B. S. Loyola College, 1957.

Giovanni Bellone, of Casale Monferrato, Italy, Dr. Pol. Sci. University of Pavia, 1955.

William Dixon Boggs, of Wheeling, W. V., B. A. West Virginia University, 1954.

J. Richard Butler, of Akron, Ohio, A. B. Earlham College, 1956.

Lyman Manley Drake, III, of Glencoe, Ill., B. A. Yale University, 1957.

John Fosdick Emery, of Washington, D. C., A. B. Wabash College, 1951; B. S. F. S. Georgetown University, 1957.

Peter Franz Geithner, of Philadelphia, Pa., B. A. Dartmouth College, 1954.

Abdul Aziz Gondokoesoemo, of Djakarta, Indonesia.

Douglas Hume Graham, of Erie, Pa., B. A. Yale University, 1955.

Richard Harper Howarth, of Wallingford, Pa., B. A. Yale University, 1954.

Peter Kilby, of Arlington, Va., A. B. Harvard University, 1957.

Francis Marion Kinnelly, of Raymond, Me., B. A. Bowdoin College, 1957.

John Adair Lepper, of Attleboro, Mass., A. B. Heidelberg College, 1957.

Mary Lee Lincoln, of Flourtown, Pa., A. B. Washington College, 1954.

Archibald Gordon MacArthur, of Bronxville, N. Y., A. B. Harvard University, 1950.

Richard Allen Melville, of Hampden, Mass., A. B. Bates College, 1954.

Eric Dwight Pace, of San Angelo, Texas, B. A. Yale University, 1957.

Drago Pamucina, of Chicago, Ill., Ph. B. Northwestern University, 1957.

Marilyn Jean Peterson, of Tacoma, Wash., B. A. Stanford University, 1956.

Nicholas Platt, of Mt. Kisco, N. Y., B. A. Harvard University, 1957.

Harold Lawrence Sandall, of Lincoln, Neb., A. B. Nebraska Wesleyan University, 1957.

Lawrence Edward Singer, of Yonkers, N. Y., B. A., New York University, 1956.

Lucille Ann Stephenson, of Saluda, N. C., B. A. University of North Carolina, 1957.

Daniel Szabo, of Brooklyn, N. Y., B. A. City College of New York, 1957.

Manfred Wilhelm Wenner, of Upper Montclair, N. J., B. A. Oberlin College, 1956.

Jan Wlodarkiewicz, of Jamaica, N. Y., A. B. Dartmouth College, 1957.

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MASTERS OF ARTS IN TEACHING

Diane Elizabeth Alwine, of Danville, Ill., B. A. Wellesley College, 1957.

Florence Amy Avidon, of New York, N. Y., B. A. University of Pennsylvania, 1958.

Richard Francis Barter, of Gray, Me., B. A. University of Maine, 1958.

Stanley Lowell Bowers, of San Gabriel, Calif., B. A. Los Angeles State College, 1958.

MaryAlice Burns, of Waukesha, Wis., B. A., University of Arizona, 1957.

John Milton Darcey, of Winsted, Conn., A. B. Trinity College, 1957.

Antonia Scott Day, of Houston, Texas, A. B. Randolph-Macon Woman's College, 1958.

Carmen Lucila Delgado, of San Juan, Puerto Rico, A. B. Trinity College, 1956; M. A. Middlebury College, 1957.

Joseph Angelo Di Venuto, of Springfield, Mass., A. B. Boston College, 1958.

James Joseph Garvey, of Vestal, N. Y., B. A. Harpur College, 1957.

Jonatha Elizabeth Gibaud, of Rochester, N. Y., B. A. Wells College, 1958.

Judith Ann Goldberg, of Baltimore, Md., A. B. Goucher College, 1958.

Michael Potter Goodrich, of Milwaukee, Wis., A. B. Grinnell College, 1958.

Donna Joy Hardy, of Jacksonville, Fla., B. A. Florida State University, 1957.

Daniel Joseph Heisey, of Baltimore, Md., B. S. Loyola College, 1958.

Catherine Marie Herlihy, of Worcester, Mass., A. B. Trinity College, 1958.

Vaughan Ambrose Johnson, of Dayton, Ohio, B. S. Wittenberg College, 1958.

Mary Virginia Jones, of Washington, D. C., B. A. University of North Carolina, 1951.

Elisabeth Keller, of Boonville, N. Y., B. A. Wittenberg College, 1958.

Anna Frenyo Kovasznay, of Baltimore, Md., M. A. University of Budapest, 1944.

Edward George Kreppert, of Chicago, Ill., A. B. Carthage College, 1956.

Susan Taft Langdon, of Providence, R. I., B. A. Pembroke College, 1958.

Maud Winborne Leigh, of Norfolk, Va., A. B. Sweet Briar College, 1958.

J. Albert M. Lettré, of Pikesville, Md., B. S. University of Maryland, 1948.

John Philip Lowe, of Rochester, N. Y., B. S. University of Rochester, 1958.

Ronald Lee Marr, of New Kensington, Pa., B. S. Grove City College, 1956.

Paul David McElroy, of Youngstown, Ohio, A. B. Allegheny College, 1958.

Suzanne Margaret McGrath, of New York, N. Y., A. B. Trinity College, 1958.

Roch Lucien Mirabeau, of Port-au-Prince, Haiti, B. L. College St. Martial, Haiti, 1941.

David Judson Olney, of New Rochelle, N. Y., B. S. Bates College, 1956.

Thor Sverre Ramsland, of Baltimore, Md., B. A. The Johns Hopkins University, 1958.

Ellen Margot Rosenberg, of New York, N. Y., B. A. William Smith College, 1958.

Marion Elizabeth Schmitt, of Weston, Mass., A. B. Oberlin College, 1958.

Karen Elizabeth Shaver, of Los Angeles, Calif., B. A. Pomona College, 1958.

Philip Schnabel Sievers, of York, Pa., B. S. C. Grove City College, 1958.

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MASTERS OF ARTS

with titles of essays

Burton Robert Aaronoff, of Brooklyn, N. Y., B. S. Brooklyn College, 1956. Chemistry.

Ronald Joseph Baumgarten, of Brooklyn, N. Y., B. S. Brooklyn College, 1956. Chemistry.

Joan Barbara Beadling, of Pittsburgh, Pa., B. A. Wittenberg College, 1957. German.

Perra Somers Bell, of Baltimore, Md., A. B. New York University, 1947. History.

The Antislavery Position of John Quincy Adams.

Carville Godfrey Bevans, Jr., of Baltimore, Md., B. A. The Johns Hopkins University, 1955. Business and Industrial Management.

Newspaper Local Display Advertising—A Study of Rate Structure.

George Eugene Brown, of Baltimore, Md., B. S. Loyola College, 1956. Philosophy.

John Eugene Brown, of Muncie, Ind., B. A. DePauw University, 1954; B. D. San Francisco Theological Seminary, 1957. Oriental Seminary.

Daniel Harris Carson, of Santa Barbara, Calif., B. A. (Psych.) University of California, 1953; B. A. (Arch.), 1954. Psychology.

A Test of a Symmetric Uncertainty Model for Determining Redundancy in Printed English.

Margaret Anne Castle, of Falmouth, Va., B. A. Oberlin College, 1957. Chemistry.

Norman Allison Chamberlain, of Baltimore, Md., A. B. The University of North Carolina, 1957. Oceanography.

Studies on the Larval Development of *Neopanope texani sayi* (Smith) and Other Xanthidae (Brachyura).

Yvonne Chiang, of Bronxville, N. Y., A. B. Adelphi College, 1956. Chemistry.

Francis D'Auvergne Collings, of Montreal, Canada, B. A. Queen's University, 1956. Political Economy.

Interregional and International Comparison of Hospital Output.

William Ritchie Darling, of Bronxville, N. Y., B. A. Goddard College, 1958. Writing.

A Collection of Stories and Plays.

Reamor Robin De La Barre, of Baltimore, Md., B. A. The Johns Hopkins University, 1956. Geography.

Chesapeake Bay Indian Population.

Mary Jane Martin Dowd, of Baltimore, Md., B. A. Goucher College, 1956. History.

The Role of the State Government in the Economy of Maryland, 1777-1807.

Edward David Eanes, of Williamsburg, Va., B. S. College of William and Mary, 1957. Chemistry.

Anne Carey Edmonds, of Baltimore, Md., A. B. Barnard College, 1948; M. S. Columbia University, 1950. Geography.

The Land Holdings of the Ridgelys of Hampton, 1726-1843.

Milton Charles Fisher, of Towson, Md., B. A. The Johns Hopkins University, 1951; B. D. The Pittsburgh-Xenia Theological Seminary, 1952; Th. M., 1953. Oriental Seminary.

Robert Flottemesch, of Baltimore, Md., B. A. The Johns Hopkins University, 1950; B. D. Nashotah House (Theological Seminary), 1956. Writing.

A Novella.

Daniel Martin Forsyth, of Glendora, N. J., B. A. The Johns Hopkins University, 1957. Psychology.

Counting Repeated Light Flashes as a Function of Their Number, Their Rate of Presentation, and Retinal Location Stimulated.

Richard Berger Friedman, of Pleasant Ridge, Mich., B. A. Kenyon College, 1957. Poltical Science.

T. H. Green's Theory of Political Obligations: A Critical Analysis.

Elly Marie Friese, of Hamburg, Germany, A. B. Goucher College, 1958. German.

Marvin Edward Gettleman, of New York, N. Y., B. A. The City College of New York, 1957. History.

Social Theories in the Era of Organized Charity.

Theodore Philip Goldstein, of Baltimore, Md., B. A. The Johns Hopkins University, 1951. Chemistry.

Frances Kenny Goodwin, of Baltimore, Md., B. S. The Johns Hopkins University, 1956. History.

Halifax Commission of 1877.

James McAlister Hardin, of Carlisle, Pa., A. B. Harvard College, 1957. Chemistry.

Guy Tilghman Hollyday, of Sparks, Md., A. B. Princeton University, 1952. German.

Nancy Howe, of Belmont, Mass., B. A. Wellesley College, 1958. Romance Languages.

Lucille Lysbeth Huggins, of Baltimore, Md., Ed. B. University of California, 1934. Art.

Guarino Guarini: The Sources and Characteristics of His Style.

Joyce Jacobson Kaufman, of Baltimore, Md., B. S. The Johns Hopkins University, 1949. Chemistry.

Jean Edwin Keith, of Baltimore, Md., A. B. Western Kentucky State Teachers College, 1942. History.

The Role of the Louisville and Nashville Railroad in the Development of Coal and Iron in Alabama, Tennessee, and Kentucky, 1873-1893.

Anthony Joseph LaPlaca, of Rochester, N. Y., A. B. University of Rochester, 1958. Classics.

Robert Lehrer, of Albany, N. Y., B. S. Union College, 1956. Chemistry.

Man-Ying Li, of Kowloon, Hong Kong. Education.

Group Guidance.

Robert Dickinson Loevy, of Towson, Md., B. A. Williams College, 1957. Political Science.

Baltimore Votes—1948-1959.

Lynn Mayer, of Portland, Ore., B. A. Reed College, 1958. German.

Aaron Paul Miller, of Chicago, Ill., A. B. University of Illinois, 1955. Writing.

A Collection of Poems and Stories.

Helen Schubert Miller, of Philadelphia, Pa., B. A. University of Pennsylvania, 1956. International Studies.

The Japanese Policy of Expansion and Chinese Nationalism.

Leonard Gerald Miller, of Baltimore, Md., B. A. The Johns Hopkins University, 1957. Poltical Science.

Judge John J. Parker: Man and Jurist.

Robert Fairchild Morrison, of Milton, Mass., B. A. Wesleyan University, 1953. Geology.

Janet Jenkins Mullally, of Bethesda, Md. Mathematics.

Mark Louis Musa, of Palisade, N. J., B. A. Rutgers University, 1956. Romance Languages.

Eugene Hoiland Peterson, of Baltimore, Md., B. A. Seattle Pacific College, 1954; S. T. B. The Biblical Seminary in New York, 1957. Oriental Seminary.

Paul Robert Pitts, of Burlington, Canada, B. Com. University of Toronto, 1955. Political Economy.

Differences in Per Capita Personal Income and Per Worker Product by Province in Canada 1928 and 1953.

Maxwell Primack, of Shamokin, Pa., A. B. Brandeis University, 1956. Philosophy.

Norman Schwartz, of Philadelphia, Pa., B. S. in Chem., University of Pennsylvania, 1957. Chemistry.

James Arthur Singmaster III, of Pelham, N. Y., A. B. Hamilton College, 1956. Chemistry.

Robert Louis Stern, of Baltimore, Md., A. B. Oberlin College, 1957. Chemistry.

Edward Dixon Stroup, of Honolulu, Hawaii, A. B. University of Hawaii, 1956. Oceanography.

Temperature, Salinity and Oxygen at 4,000 and 5,000 Meters in the World Oceans.

Sister Patricia Julie Sullivan, S. N. D. deN., of Washington, D. C. Chemistry.

Ann Sheldon West, of Lake Forest, Ill., A. B. Radcliffe College, 1957. Romance Languages.

Harold Stacy Wilson, of Bristol, Tenn., B. A. King College, 1957. History.

Democracy among the Brahmins: Carter Glass, an Agent in the Implementation of Negro Disenfranchisement in Virginia, 1901-02.

Rudolph Ernst Karl Winter, of Tappan, N. Y., A. B. Columbia University, 1957. Chemistry.

Albert Otto Wlecke, of Brooklyn, N. Y., A. B. Saint Peter's College, 1957. Writing.

A Play and Selected Poems.

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DOCTORS OF PHILOSOPHY

with titles of dissertations

Bruce Murray Anderson, of Baltimore, Md., B. S. Ursinus College, 1953; M. S. Purdue University, 1954. Biology.

Coenzyme Analogues and Their Properties.

Alan J. Bearden, of Baltimore, Md., B. A. The Johns Hopkins University, 1951. Physics.

X-Ray Attenuation from 3 to 40 Kev in Selected Elements from Z=1 to Z=79.

Wilson Basta Bishai, of Hyattsville, Md., B. A. Washington Missionary College, 1953; M. A. Seventh-Day Adventist Theological Seminary, 1954. Oriental Seminary.

The Coptic Influence on Egyptian Arabic.

Robert Gordon Boling, of Baltimore, Md., B. S. Indiana State Teachers College, 1952; B. D. McCormick Theological Seminary, 1956. Oriental Seminary.

"Synonymous" Parallelism in the Book of Psalms.

Robert Ignatius Burns, S. J., of San Francisco, Calif., B. A. Gonzaga University, 1946; M. A., 1947. History.

The Crusader Kingdom of Valencia (1238-1276): A Study in the Organization of the Mediaeval Frontier.

Edward Fay Campbell, Jr., of Chicago, Ill., B. A. Yale College, 1953; B. D. McCormick Theological Seminary, 1956. Oriental Seminary.

The Hypothetical Coregency of Amenophis III and Akhenaten with Special Reference to the Amarna Letters.

Ray LeRoy Cleveland, of National City, Calif., A. B. Westmont College, 1951; M. A. The Johns Hopkins University, 1956. Oriental Seminary.

American Archaeological Excavations at Ader (1933) and Petra (1934) in Trans-Jordan.

Margaret Elisabeth Courtney, of Baltimore, Md., B. A. The American University, 1937; M. A. Teachers College, Columbia University, 1948. Education.

The Effectiveness of the Classroom Laboratory in Nursing Instruction.

Eugene Lionel Cox, of Baltimore, Md., B. A. The College of Wooster, 1953. History.

Political and Social Institutions in Bresse (1250-1350).

Everett Uberto Crosby, II, of Baltimore, Md., B. A. Yale College, 1954. History.

The English Episcopate during the Reign of Henry I with an Account of the Welsh Dioceses.

James Cushman Davis, of Phoenixville, Pa., A. B. Princeton University, 1952; M. A. The Pennsylvania State University, 1956. History.

The Venetian Ruling Class in the Last Centuries of the Republic; Problems of a Closed Caste.

Vernon E. Derr, of Baltimore, Md., A. B. St. John's College, 1948. Physics.

Ergodic Theorems under Random Perturbation.

Richard Day Deslattes, Jr., of New Orleans, La., B. S. Loyola University of the South, 1952. Physics.

An Experimental Study of X-Ray Attenuation Coefficients 8 to 30 Kev.

Velta Erdmanis DiGiorgio, of Baltimore, Md., B. S. University of Richmond, 1953. Chemistry.

The Low-Lying Singlet and Triplet Excited States of Formaldehyde.

Wallace Gary Ernst, of Washington, D. C., B. A. Carleton College, 1953; M. S. University of Minnesota, 1955. Geology.

Phase Relations and Stabilities of the Alkali Amphibols.

Joseph Milton Gallanar, of Baltimore, Md., A. B. University of Washington, 1950; M. A., 1952. History.

Studies in the Idea of Anxiety and Dissolution in French Thought from Jean-Jacques Rousseau to Pierre Simon Ballanche.

Bernard Carter Hearn, Jr., of Chevy Chase, Md., B. A. Wesleyan University, 1954. Geology.

Geology of the Northern Half of the Rattlesnake Quadrangle, Bearpaw Mountains, Montana.

Donald Frederick Heath, of Baltimore, Md., B. A. The Johns Hopkins University, 1953. Physics.

New Data on the Emission Spectrum of Air.

Michael Jaworskyj, of Baltimore, Md., B. A. The Johns Hopkins University, 1954; M. A., 1955. Political Science.

Soviet Critique of Western Legal Philosophy.

Alger Francis Johns, of Adelphi, Md., B. A. Pacific Union College, 1939; M. A. Seventh-Day Adventist Theological Seminary, 1949. Oriental Seminary.

The Chaldean Kings of Babylonia.

Marvin Robert Lamborg, of Baltimore, Md., B. S. The University of Rochester, 1951. Biology.

Chemical and Enzymatic Studies of Some Diphosphopyridinium Compounds.

Thomas Augustine Langan, Jr., of New Rochelle, N. Y., B. S. Fordham College, 1952. Biology.

Pyridine Nucleotide Biosynthesis.

Mary Gresham Machen, of Baltimore, Md., A. B. Goucher College, 1942; M. A. The Johns Hopkins University, 1948. History.

Images of Joan of Arc: Their Political Uses in Modern France.

Melecio Salomon Magno, of Munoz, Nueva Eceja, Philippines, B. S. University of the Philippines, 1940; M. A. The Johns Hopkins University, 1951. Physics.

Absorption, Fluorescence and Zeeman Effect of Anhydrous Samarium Chloride at Low Temperature.

Francis Manley, of Atlanta, Ga., A. B. Emory University, 1952; M. A., 1953. English.

Donne's *Anniversaries*: Edited with Commentary.

Basil John Moore, of Toronto, Canada, B. A. University of Toronto, 1955. Poltical Economy.

The Effects of Counter-Cyclical Monetary Policy on the Canadian Chartered Banks, 1935-1957.

David Shuichi Moroi, of Tokyo, Japan, B. S. St. Paul's University, Japan, 1953. Physics.

Bremsstrahlung of High Energy Electrons from an Extended Proton.

Robert Emmett Murphy, of Ahmeek, Mich., A. B. Northern State Teachers College, 1938; M. A. University of California, 1949. Psychology.

Effects of Threat of Shock, Distraction, and Task Design on Performance.

James Gordon Nelson, of Hamilton, Canada, B. A. McMaster University, 1955; M. A. University of Colorado, 1957. Geography.

The Geography of the Balsa: A Case Study in the Geography of Primitive Watercraft.

Brendan Peter O Hehir, of Baltimore, Md., B. S. Loyola College, 1954; M. A. The Johns Hopkins University, 1954. English.

Balanced Opposites in the Poetry of Pope, and the Historical Evolution of the Concept.

Bernard Jay Paris, of Baltimore, Md., B. A. The Johns Hopkins University, 1952. English.

Experiments in Life: George Eliot's Reconciliation of Realism and Moralism.

Sheila Murphy Pfafflin, of Pasadena, Calif., B. A. Pomona College, 1956; M. A. The Johns Hopkins University, 1958. Psychology.

Stimulus Meaning in Stimulus Predifferentiation.

Melukote Krishna Rao Ramaswamy, of Bangalore, India, B. Sc. (Hon.) University of Mysore, 1952; M. Sc. 1954. Physics.

Studies in K-Capture Positron Branching Ratios.

Olaf Norris Rask, of New York, N. Y., B. E. The Johns Hopkins University, 1949. Physics.

Measurements of the gamma Neutron Angular Correlation Function for the B^{11} (d, n) C^{12} Reaction.

Barbara Zuan Renkin, of Washington, D. C., A. B. Bucknell University, 1952; A. M. Mount Holyoke College, 1954. Physiology.

The Response of Single Neurons in the First Somatic Sensory Area of the Cat in Relation to the Position and Frequency of Electrical Stimulation of Cutaneous Receptive Fields.

Virginia Voigt Roeder, of Baltimore, Md., B. S. Oklahoma College for Women, 1946; M. Ed. The Johns Hopkins University, 1953. Education.

The Scholastic Performance of Children of Working Mothers.

Ram Sarup, of Delhi, India, B. Sc. University of Delhi, 1949; M. Sc., 1951. Physics.

Fluorescence and Absorption Spectra and Zeeman Effects of Praseodymium and Thulium Salts at 77°K and 4°K.

Seymour Oscar Schlanger, of Brooklyn, N. Y., B. S. Rutgers University, 1950; M. S. 1951. Geology.

Petrology of the Limestones of Guam.

Edward Nicholas Shipley, of Baltimore, Md., B. A. The Johns Hopkins University, 1954. Physics.

Inelastic Scattering of Neutrons by Na^{23}.

Helen Shirley Thomas, of Baltimore, Md., A. B. Goucher College, 1953; M. A. The Johns Hopkins University, 1955. Political Science.

Scholar on the Bench: The Judicial Performance of Justice Felix Frankfurter.

David Ronald Tilley, of Fuquay Springs, N. C., B. S. University of North Carolina, 1952; M. S. Vanderbilt University, 1954. Physics.

Studies in Radioactivity.

Joseph Edgar Todd, of Richmond, Ky., B. S. Eastern Kentucky State College, 1948; M. S. Georgia Institute of Technology, 1950. Chemistry.

Deuterium Exchange Kinetics in the Diborane-Tetraborane System.

George Alfred Vanasse, of Woonsocket, R. I., B. S. in Physics, University of Rhode Island, 1950; M. S. in Physics, Boston College, 1952. Physics.

Interferometric Spectroscopy in the Far Infrared.

William Frederick Waber, Jr., of Baltimore, Md., B. S. in Educ. Ashland College, 1951; B. A. Kenyon College, 1954; M. A. The Johns Hopkins University, 1956. Philosophy.

The Roles of Reason and Sentiment in Hume's Doctrine of the Social Virtues.

Jack Eli Werner, of Brooklyn, N. Y., B. S. Massachusetts Institute of Technology, 1948; M. S., 1949. Aeronautics.

Shock Wave Turbulence Interaction: Investigations in a Shock Tube.

Fred Huffman Wilt, of Elkhart, Ind., A. B. Indiana University, 1956. Biology.

The Differentiation of Visual Pigments during Metamorphosis of Larvae of *Rana catesbeiana*.

Orval Stewart Wintermute, of Baltimore, Md., B. A. Maryville College, 1950; B. D. McCormick Theological Seminary, 1954. Oriental Seminary.

Semitic Loanwords Appearing in Egyptian Texts from the New Kingdom.

Maria Manika Wodzicka, of New Zealand, B. Agr. Sc. University of New Zealand, 1952; M. Agr. Sc., 1955. Bioclimatology.

A Study of Some Environmental Factors Affecting Wool Growth and Heat Tolerance of Sheep.

Franklin Myles Wright, of Collinsville, Ill., A. B. Cornell University, 1948. History.

The House of York, 1415-1450.

Richabd August Wunderlich, of Turtle Creek, Pa., B. S. University of Pittsburgh, 1951; A. M. West Virginia University, 1952. Psychology.

Strength of a Generalized Conditioned Reinforcer as a Function of Variability of Reward.

Lloyd Stanley Yeakel, Jr., of Perkasie, Pa., B. S. Franklin and Marshall College, 1953; M. S. Northwestern University, 1955. Geology.

Paleocurrents and Paleogeography of the Tuscarora Quartzite.

George Joseph Zebian, of Coaldale, Pa., A. B. Muhlenberg College, 1950; M. A. The Johns Hopkins University, 1952. Classics.

The Use of the Ablative of Quality and Ablative of Respect in Latin Literature.

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